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ADJUSTABLE NOISE BLANKER FOR R70

by Guy Atkins (via Cascade Mountain DX Club)

Here's a simple modification for the popular ICOM R70 receiver that increases the usefulness of the noise blanker. This circuit idea was seen in the *ICOM Newsletter*.

As it comes from the factory, the ICOM's N.B. only works on some kinds of impulse noise (since it has a fixed *threshold* value. This mod allows the seldom-used "Monitor Gain" rotary control to be used as a variable threshold control; the end result is a N.B. with the same flexibility as the R71A's noise blanker (which comes with a variable threshold control).

Locate resistor R13 on the main board. Replace it with a 150K resistor; but instead of grounding one end of R13, connect a 6" length of insulated wire to the free end of R13. (Note that the other side of R13 goes to the wiper of potentiometer R104.)

Find location P2 on the ICOM's Switch Board. There should be a blue wire coming from this spot. Strip back some insulation from this blue wire and solder the free end of the 6" wire to it.

INITIAL ADJUSTMENT: Set the monitor knob at the 9 o'clock position. Then adjust pot R104 to the point where a shortwave signal just begins to sound distorted and garbled. This adjustment works best when listening to a SSB signal in a crowded ham band. This means you are getting enough N.B. sensitivity to detect signals. It also means the N.B. is set too high under normal circumstances, but it's a good test to check the performance of the noise blanker.

You'll find that the monitor control now functions as a threshold control. However, the N.B. sensitivity increases in a counterclockwise direction. Keep this in mind since it is the opposite direction from what you'd expect.

I've used this mod on my receiver for the last couple of months, and found it particularly helpful in getting rid of some powerline noise that was destroying signals on the tropical bands. It is not a cure-all, but this modification helps knock down more noise sources than is possible with the R70's stock noise blanker.